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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,295	11/03/2000	Ronald B. Lavochkin	4136-20CPRE	6742

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EXAMINER

LEO, LEONARD R

ART UNIT PAPER NUMBER

3753

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/706,295

Applicant(s)

LAVOCHKIN, RONALD B.

Examiner

Leonard R. Leo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

The amendment filed on January 7, 2005 has been entered. Claims 1-16 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10-11 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by McCall. The recitation of “for cooling a heat generating component in contact therewith” is considered to be a statement of intended use, even if claimed, does not merit patentable weight unless the body of the claim refers back to, is defined by, or otherwise draws life and breadth from such intended use. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Regarding claim 16, McCall (column 6, lines 66-68 and column 8, lines 30-41) discloses an aluminum base member 64 and copper fluid conduit 22.

Claims 10-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Beck, Jr. (Figure 3). The recitation of “for cooling a heat generating component in contact therewith” is considered to be a statement of intended use, even if claimed, does not merit patentable weight unless the body of the claim refers back to, is defined by, or otherwise draws life and breadth from such intended use. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Regarding claims 12-13, Beck, Jr. (column 5, lines 12-26) discloses an adhesive is disposed between the fluid conduit and

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heat sink base member. Regarding claim 16, Beck, Jr. (column 4, lines 53-57) discloses an aluminum base member 10 and copper fluid conduit 11.

Claims 1, 10-11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Conte (Figure 6). The functional recitation "for maintaining said fluid conduit in said channel by a friction fit formed between said sidewalls and said fluid conduit" has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D. 172; 388 O.G. 279.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conte in view of Beck, Jr.

Conte discloses all the claimed limitations except an adhesive between the fluid conduit and heat sink base member.

Beck, Jr. discloses a heat exchanger comprising a heat sink base member 10 having a channels with fluid conduit 11; wherein an adhesive is disposed between the fluid conduit and heat sink base member for the purpose of enhancing heat exchange (column 5, lines 12-26).

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Since Conte and Beck, Jr. are both from the same field of endeavor and/or analogous art, the purpose disclosed by Beck, Jr. would have been recognized in the pertinent art of Conte.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Conte fluid conduits disposed on opposite sides and offset relative to one another for the purpose of providing uniform heat exchange as recognized by Beck, Jr.

Claims 3-5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conte in view of Eitel.

The device of Conte lacks a fluid conduit located on alternative sides.

Eitel discloses a heat exchanger comprising a heat sink base member 120 having a plurality of channels with fluid conduits 112; wherein the fluid conduit are disposed on opposite sides and offset relative to one another for the purpose of providing uniform heat exchange.

Since Conte and Eitel are both from the same field of endeavor and/or analogous art, the purpose disclosed by Eitel would have been recognized in the pertinent art of Conte.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Conte fluid conduits disposed on opposite sides and offset relative to one another for the purpose of providing uniform heat exchange as recognized by Eitel.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck, Jr. or McCall in view of Takagi et al.

The device of Beck, Jr. or McCall lacks a local deformation in the channel and conduit.

Takagi et al discloses a heat exchanger (Figure 6A-C) comprising a heat sink base member 2 having a channel 4 with a fluid conduit 3 and a local deformation therein for the purpose of improving heat exchange.

Since Beck, Jr. or McCall and Takagi et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Takagi et al would have been recognized in the pertinent art of Beck, Jr. or McCall.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Beck, Jr. or McCall a local deformation therein for the purpose of improving heat exchange as recognized by Takagi et al. Furthermore, Figure 7 of Beck Jr. discloses deformation 20 to improve heat exchange. By employing the deformation in the channel, a manufacturing step would be reduced.

Claims 1-2 and 6-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al in view of Conte.

Takagi et al (Figures 6A-6C) discloses all the claimed limitations except the fluid conduit being coplanar with the base member surface.

Conte discloses a heat exchanger (Figure 6A-C) comprising a heat sink base member 110 having a plurality of channels with fluid conduits 150-156; wherein the fluid conduits are coplanar with the base member to directly contact the heat generating component for the purpose of improving heat exchange.

Since Takagi et al and Conte are both from the same field of endeavor and/or analogous art, the purpose disclosed by Conte would have been recognized in the pertinent art of Takagi et al.

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Takagi et al fluid conduits coplanar with the base member to directly contact the heat generating component for the purpose of improving heat exchange as recognized by Conte.

Regarding claims 2 and 12-13, Takagi et al (column 7, lines 36-41) and adhesive between the fluid conduit 3 and base member 2.

Regarding claims 6 and 16, Takagi et al (column 4, lines 18-21 and column 7, lines 17-22) discloses the base member is composed of aluminum and the fluid conduit 3 is composed of copper.

Regarding claims 7-9, Figures 6A and 6C of Takagi et al discloses a local transverse deformation in the channel 3 of the base member 2.

Response to Arguments

The rejection of claims 11 and 13 under 35 U.S.C. 112, second paragraph, is withdrawn in view of the amendment.

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

In the rejections in view of McCall and Beck, Jr., claim 10 does not positively recited the heat generating component in combination with the heat sink. Amended claim 1 recites the combination and the rejections have been withdrawn. The recitation of "configured" is deemed to be similar to "adapted", where it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Conte is being applied under paragraph (e) of 35 USC 102 with respect to the filing date of applicant's parent application filed on December 15, 1993. However, if the "in-part" portion of the disclosure is not present in the instant claims, paragraph (b) of the statute would be applicable.

The rejections in view of Eitel and Takagi et al are deemed correct for lack of any arguments to the contrary. Applicant merely states the secondary references do not overcome the alleged shortcomings of the primary reference of Beck, Jr. and McCall.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3753

July 20, 2005